

WHAT IS CLAIMED IS

1. An adjustable length gas spring, comprising
 - a casing (2) which has a central longitudinal axis (8) and is filled with a pressure fluid;
 - a guide and seal unit (7; 7b) which closes the casing (2) at a first end (6) thereof;
 - a piston rod (9) which has an outer end (10) and is extended through, and sealed towards, the guide and seal unit (7; 7b) out of the first end (6) of the casing (2);
 - a piston (13) which is guided in, and sealed towards, the casing (2) and connected with the piston rod (9);
 - a first sectional casing chamber (16) which is formed between the piston (13) and the guide and seal unit (7; 7b);
 - a second sectional casing chamber (17) which is defined by the piston (13) and faces away from the first sectional casing chamber (16);
 - a valve (21) which is disposed in a vicinity of the piston (13) for interconnection of the sectional casing chambers (16, 17),
 - the valve (21) having a valve pin (25), which is displaceable along the central longitudinal axis (8), for actuation of the valve (21) from outside the casing (2); and
 - at least one spring element (48; 48a; 48b; 48c),
 - which is disposed between the piston (13) and the first end (6) of the casing (2),
 - which encircles the piston rod (9),
 - which supports itself on a side opposite the guide and seal unit (7; 7b), and
 - which springily counteracts any extension of the piston rod (9) for at least part of a length of extension.

2. A gas spring according to claim 1, wherein the at least one spring element (48; 48a; 48b; 48c) comprises at least one saucer spring (50).
- 5 3. A gas spring according to claim 2, wherein the at least one spring element (48; 48a; 48b; 48c) comprises an assembly of saucer springs (50).
- 10 4. A gas spring according to claim 3, wherein the assembly of saucer springs (50) is confined by an encapsulation (52).
- 15 5. A gas spring according to claim 1, wherein the at least one spring element (48; 48a; 48b; 48c), upon extension of the piston rod (9), is supported towards the guide and seal unit (7) in the direction of extension (37).
- 20 6. A gas spring according to claim 5, wherein the at least one spring element (48; 48a; 48b; 48c) is disposed in the first sectional casing chamber (16).
7. A gas spring according to claim 1, wherein the guide and seal unit (7b) is
20 displaceable in the casing (2).
- 25 8. A gas spring according to claim 7, wherein displaceability of the guide and seal unit (7b) counter to the direction of extension (37) is defined by a stop (43).
9. A gas spring according to claim 7, wherein the at least one spring element (48b; 48c) is supported towards the guide and seal unit (7b) counter to the direction of extension (37).

10. A gas spring according to claim 1, wherein an energy accumulator is provided between the second sectional casing chamber (17) and the closed second end (3), opposite the first end (6), of the casing (2).
- 5 11. A gas spring according to claim 1, wherein a gas-filled compensation chamber (20) is provided between the second sectional casing chamber (17) and the closed second end (3), opposite the first end (6), of the casing (2).